



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/687,322 Confirmation No. 8774
Applicant (s) : Robert Urscheler et al.
Filed : October 16, 2003
TC/A.U. : 1731
Examiner : Jose A. Fortuna
Title : PROCESS FOR MAKING COATED PAPER OR
PAPERBOARD
Docket No. : 62738C
Customer No. : 00109

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING
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February 28, 2007

DATE OF DEPOSIT

Angela Brooks
PRINT OR TYPE NAME OF PERSON SIGNING CERTIFICATE

Angela Brooks
SIGNATURE OF PERSON SIGNING CERTIFICATE

February 28, 2007
DATE OF SIGNATURE

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

DECLARATION UNDER 37 C.F.R. § 1.132

I, Michael J. Devon do hereby declare that:

1) I received Ph.D. degree in Emulsion Polymerization from the University of
Waterloo in Waterloo Ontario, Canada in 1987.

I have worked for 20 years in the fields of Plastics and Latex Product
Development, starting with my employment at Dow Chemical in 1987

From 1993 to 2005 I have been working in latex research and involved in latex
development for paper coating starting in 1995. From 2002 to 2005 I was involved
with the development of curtain coating technology for paper and paperboard
applications.

From 2006 to present I have held the title of Global Intellectual Capital Manager for Dow Chemical's latex business.

I am a coauthor of 12 publications in scientific journals and presented 11 external and invited presentations on latex technology.

2) I reviewed U.S. Patent 5,789,031, (hereinafter Hirabayashi '031). I carried out, or had carried out under my direction, under carefully controlled conditions, a set of experiments to prepare a coating color based on the description of the coating color of Embodiment 1 of said patent for the purpose of evaluating certain physical properties of that coating color. The preparation procedure was as follows.

3) All parts and percentages are by weight. 30 parts of ground calcium carbonate (HYDROCARB 90, having a particle size distribution of 90% below 2 microns, available from Pluess-Stauffer), 70 parts of kaolin (AMAZON+, having a particle size distribution of 95% below 2 microns, available from Kaolin International), 10 parts of a styrene-butadiene copolymer latex (DL 966, available from The Dow Chemical Company), five parts of oxidized, cooked corn starch (C FILM 7311, available from Cargill), 0.20 parts of a water proofing agent (CARTABOND TSI, available from Clariant), and 0.20 parts of NOPCOTE C-104 were mixed to obtain a coating color with a 55% solids concentration. I note that Embodiment 1 of said patent refers to "other sub-agents;" however, those sub-agents are not identified in the patent.

4) Various physical properties of the coating color were measured according to the methods detailed in Applicants' specification at pages 17-20, and the results are listed below:

Brookfield viscosity, 100 RPM: 157 mPa.s

Capillary High-Shear Viscosity ($500,000\text{s}^{-1}$): 8.5 mPa.s

Shear-Thickening Index: 0.577

Immobilization Solids Content: 87%

Coating Application Solids: 55%

5) The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are

believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

FEB. 27, 2007

Date

Michael Devon

DR. MICHAEL J. DEVON